

Abstract of the Disclosure

Provided is a broadband phase shifter using a coupled line and parallel open and short stubs. The broadband phase shifter of the present research has a new switching network structure by forming a coupled line, main transmission lines and parallel  $\lambda/8$  ( $45^\circ$ ) open and short stubs on both ends of the main transmission lines in order to obtain broadband phase characteristic that the phase difference between two networks is uniform. The broadband phase shifter includes a first path network including a reference standard transmission line whose input/output characteristic impedance is  $Z_0$  and electrical length is  $\theta_1$ ; a second path network having two symmetrical main transmission lines connected to each other by a coupled line in the center and parallel open and short stubs connected to both ends of the two symmetrical main transmission lines, the main transmission lines having characteristic impedance  $Z_m$  and an electrical length  $\theta_m$  and the parallel open and short stubs having characteristic impedance  $Z_s$  and an electrical length  $\theta_s$ ; and a switching means for selecting only one path among the first path network and the second path network.